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Applicant: Roger Hewson

Title: Developing the Twelve Cognitive Functions of Individuals

Examiner: Nikolai A. Gishnock

Mailed: December 28, 2007

South Casco, Maine

DECLARATION IN SUPPORT OF RESPONSE TO OFFICE ACTION
STATEMENT OF ROGER D. HEWSON UNDER 37 CFR §1.132

Mail Stop

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

Dear Sir:

1. My name is Roger Hewson. I reside in Raymond, Maine.
2. I am an interested party in this invention as the inventor.
3. I am a graduate Civil Engineer from McGill University in Montreal, Canada.
4. I have directly employed and supervised the hiring of a total of over 800 individuals in my wholly owned companies, and have been the chief executive of these companies for a total of over 40 years. My first business was Hewson Construction Ltd., which built many large office buildings, warehouses, and high-rise structures. My later business was Sabre Yachts, which built over 1600 ocean cruising yachts up to 42 ft in length. I

am now retired from this company.

5. I founded the Paragon Leadership Institute, my private Maine Corporation, in 1992. This organization is solely dedicated to the research and documentation of executive leadership training and development programs.

My principle activity since 1994 has been developing the Cognitive Architecture System of Twelve Cognitive Functions covered by this patent application, requiring over 10,000 hours of my research and development time over the ten-year period from 1994 to 2004 which included extensive research of prior art and other publications, and extensive trial-and-error experimentation to find the ideal structure of this invention. The thoroughness and effectiveness of this invention was validated by confirming its real-life application, utility value, and validation through a detailed study of dozens of articles in the Harvard Business Review. I interviewed a large number of individuals in this research, development, and validation effort, including prominent corporate executives, industrial psychologists, and management consultants. This invention gradually evolved over this ten-year period into its present structure and details as the system and method recorded in the patent Application and Amendment documents.

This included my substantially researching and highlighting over 350 books on leadership, management, psychology, and neuroscience, all of which are sorted by category and cataloged with library style reference labels in my office. Also, this research effort included studying and highlighting relevant passages of many hundreds of business journals and business magazines, such as the Harvard Business Review, MIT Sloan Management Review, Fortune magazine, and Business Week magazine. All of these are currently in my personal business library.

A total of 1178 reference entries were made on an Excel spreadsheet through 2004 cataloging my non-fiction library of books and relevant management journal articles by title, author, publisher, copyright date, and library-style book reference number. All of these publications are shelved at my business office. This library has expanded substantially since 2004, and now totals non-fiction 983 books and many hundreds of

business journals and magazines, all related to management topics and the subject matter of this invention.

6. My interest in executive development, and the success of the management team I had developed at Sabre Yachts, led to my being chosen as the 1985 "Small Business Person of the Year" by the Small Business Administration (SBA) in Washington for the State of Maine and for the six-state New England Region, and "Entrepreneur of the Year" by the Maine Society of Entrepreneurs in 1987.

7. I learned a great amount about differing executive leadership styles interacting with a group of prominent New England executives while serving a six-year term on the Federal Reserve Bank of Boston's business advisory council from 1989 to 1994. I twice represented the New England Region at the annual business advisory conference in Washington with the Federal Reserve Bank's board of directors and its chairman, Alan Greenspan.

8. I served as an officer or director of ten business and management development organizations, which gave me great insight into executive competencies. These included being president of the Executive Development Institute, chairman of the Maine Delegation to the White House Conference on Small Business, chairman of the National Sailing Industry Association, director of the National Marine Manufacturers Association, director of the Smaller Business Association of New England, and Boston chapter director of the Strategic Leadership Forum. I served as a contributing editor of the *Strategy & Leadership* journal, with over 50 executive-summary-style articles published in this national publication.

9. I completed the course to become a qualified administrator of the Praendex Inc. "Predictive Index" employee evaluation program in December 1980, referred to in the specification of this invention. I used this employee evaluation program extensively in employee evaluation and development efforts, surveying over 100 individuals in my

company to better understand their different management styles and to aid them in executive development.

10. I began using the Myers Briggs Type Indicator (MBTI) in my business in 1987. I completed the course to become a qualified administrator of the MBTI in 1998. I described the MBTI as the nearest prior art in the specification of my invention, and it is also referenced in the Office Action dated August 1, 2007 in opposition to my invention through citations of the Wood and Buffington inventions.

11. I learned more about the heritage and structure of the MBTI through attending a number of MBTI sponsored seminars, an annual national convention on MBTI, and many regional MBTI association meetings. It became very apparent to me that there is an unfilled need for an updated alternative to the MBTI that more closely matches the requirements of executives managing businesses and overseeing executive development in the 21st Century.

12. I have included an article from the May 2007 issue of the TM (Talent Management) journal with the title, *"Is Myers-Briggs Still Viable,"* regarding the MBTI, and noting that it has been used by 40 million people in 17 countries. (Attachment "A", including a copy of the cover and pages 22 to 27 of this journal issue.) The significance of the field of my invention is illustrated by the fact that 40 million people have used Myers-Briggs in over 17 countries, and that more than 2 million administrations of the tool will occur this year, as noted in this TM journal article.

This article confirms my conclusions about the severe limitations and incompleteness of the MBTI. It implies that MBTI has not succeeded in providing the benefit of its ongoing daily use in business talent management and development programs, which is a major advantage provided by my invention.

This article, although published this year, identifies and underscores the long-felt need established over many years for a superior alternative to the MBTI that is more user-friendly, non-psychological in nature, more complete, more usable in business

settings, and consistent with the culture and use of the English language of organizations today as provided by this invention.

This article also identifies that many millions of individuals have had the opportunity to come up with an improved and updated alternative to the MBTI but have failed to do so.

On page 24, the author notes, *"Millions have taken the tool, and many have received a pretty bad interpretation of the results,"* adding, *"The main criterion associated with a bad interpretation is that the information shared was superficial, stereotypical, and a 'fun and games' presentation."*

On page 27, the author notes that, *"It is likely that the MBTI is also the most under-used tool. Too many facilitators provide a 'drive-by' introduction to the basic concepts and never really tap into the results in a way that promotes individual development and understanding of group behavior."*

Also, on page 27, at the very end of the article, the author notes about the MBTI, *"Is it viable? Absolutely, in the hands of a knowledgeable user. Unfortunately, and for far too many learners, this knowledge is not part of the process."*

13. I have included pages from the 2004 book, *The Cult of Personality Testing: How Personality Tests are leading Us to Miseducate Our Children, Mismanage our Companies, and Misunderstand Ourselves*, by Annie Murphy Paul, former Senior Editor of the *Psychology Today* journal. She devotes 32 pages to the MBTI, and copies of the relevant pages of this book are provided. (Attachment "B", including a copy of the cover, the copyright page, and pages 125, 132, 133, and 265 of this book.)

On page 125 she notes about the MBTI that, *"It is used by thousands of companies, including eighty-nine of the Fortune 100."* [The magazine's list of largest 100 companies in the U.S.]. This further attests to the long-felt need of major corporations for an instrument of this type, better served by the superior alternative of this invention that others have failed to provide.

On pages 132 and 133 she quotes others as having written about the deficiencies and limitations of the MBTI as follows:

"An act of irresponsible armchair philosophy," (John E. Barbuto in *Psychological Reports*, April 1997);

"Too slick and simple, possessing an almost horoscope-like quality," (Robert J. Gregory, author of *Psychological Testing: History, Principles, and Applications*, in 1996.)

"A Party Game," (Robert Hogan in the *Baltimore Sun*, July 14, 1990.)

The author of this book, Annie Murphy Paul, further states, *"when academic psychologists have evaluated the indicator, their judgments have not been kind."*

These quoted statements further attest to this long-felt need, served by the Applicants invention, that others have failed to address.

14. I have prepared a three-page comparison chart illustrating the differences between my invention and the MBTI, which is the nearest prior art I have discovered.

(Attachment "C") This comparison highlights the significant differences of my invention over the MBTI in many dimensions, including the number of elements, the structure of the elements, and the relationship of elements compared to prior art.

15. My motivation for developing a contemporary and superior alternative to the MBTI, represented in this invention, has been the vision of providing a systematic method to enhance the cognitive effectiveness of executives and other individuals. This is achieved, through education by instruction, about the understanding and proper use of the cognitive architecture system of twelve cognitive functions discovered in this invention.

16. I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fines or imprisonment, or both, under U.S.C. 1001 and that such willful false statements may jeopardize the validity of his application or any patent issued.

Signed Roger D. Hewson Date 12/28/07

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Talent Management

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Forty million people have used Myers-Briggs in more than 17 countries. The tool is arguably one of the most published and criticized personality assessments tools available. But despite its massive use, one question remains:

Is Myers-Briggs Still Viable?

SEE PAGE 22 FOR FULL STORY PAGE





Is Myers-Briggs Still Viable?

Forty million people have completed the Myers-Briggs Type Indicator (MBTI) personality assessment. More than 2 million administrations of the tool will occur this year. Its use in 17 countries has grown 30 percent in each of the past five years. Despite its massive use, one question remains: Is the most published and criticized inventory in the history of testing is still useful after 50 years?

It depends. In the hands of a competent practitioner, the MBTI is a viable tool.

When its dynamic is understood, the MBTI's viability and lasting value is at its zenith of utility.

Nevertheless, it does receive a fair amount of criticism and objections.

OBJECTION 1:

THE TOOL ISN'T SCIENTIFICALLY SOUND

In 1998, the MBTI was revised, using Item Response Theory (IRT), a powerful statistical methodology. Using a census-sampling technique, the MBTI was revised, based on a national sample, and analyzed with IRT methods. A panel of Ph.D. specialists participated in the 1998 revision to ensure high scientific standards were met in the application of IRT methods.

OBJECTION 2:

THE INSTRUMENT STEREOTYPES PEOPLE

According to the MBTI manual and other official documents related to the MBTI, the tool is about prefer-

ences, tendencies and potentials in development. Isabel Myers, MBTI co-creator, said she called it an indicator rather than a test, a measuring tool or a categorizing device — a description is not a prediction.

OBJECTION 3:

THERE ISN'T ANY SUCH THING AS A PERSONALITY TYPE (PEOPLE ARE MORE COMPLEX THAN FOUR LETTERS)

Myers was clear her tool was intended to introduce individuals to a model of psychological processes and development that was practical. The model, articulated by Carl Jung, is simply that there are dimensions of perceiving information and acting on experience that affect how we adapt, learn and grow. The instrument was designed to help individ-

Me, Myself and MBTI

Tegan Jones

I know a lot about myself. Having lived my whole life as me, I consider myself an expert on the subject. I know I'm quite opinionated, and I often intimidate others with the strength of my convictions. I know I can be idealistic to a fault, often neglecting critical details in favor of the big picture. I know some people see me as arrogant. Yet, I didn't know these traits classify me as an ENTP.

I also didn't know what an ENTP (Extroverted Intuitive Thinking Perceiving) was until I took the Myers-Briggs Type Indicator (MBTI). After answering a series of paired questions, I spoke to a professional interpreter who used my results to offer insights into the way I act.

At first, I was intrigued by this intellectual exercise but saw little value in having a stranger tell me I have a penchant for procrastination. (This was something I already knew.)

As the interpretative session continued, however, I began to see the system's value. As Daniel P. Ahern, Leadership Performance Systems director of business development, talked to me about my type, I realized I wasn't just learning about my personality preferences but about how my actions and reactions affect my professional performance, as well.

This knowledge, he said, could help me enhance my virtues and mitigate my vices to become a better worker and leader.

To demonstrate his point, Ahern described a hypothetical situation in which I would lead a meeting some of my introverted colleagues would attend. In this scenario, he explained, my high energy and big-picture mentality could make my co-workers feel intimidated and over-

whelmed. By asking more questions and providing more data than I personally found necessary, I could create a more comfortable and productive working environment for everyone involved, he said.

This, I learned, is the ultimate benefit of determining someone's type.

"Where type gets used most effectively inside an organization is when someone asks, 'What's the makeup of our team? What do the team members need relative to how they prefer to function?'" Ahern explained.

Looking at the MBTI in this light helped me understand how this tool is different from the others you can find online. Other type indicators and temperament sorters described me accurately but failed to offer any valuable insights that could help me with my career.

uals learn about typical ways of perceiving and judging information, as well as experiences that are likely to be consistent over time.

OBJECTION 4: EVERYBODY'S DONE IT, AND THERE ISN'T ANYTHING NEW. IT'S ALL PRETTY SUPERFICIAL NOW

Millions have taken the tool, and many have received a pretty bad interpretation of the results.

Those who've had a bad experience are unlikely to be open to reviewing the information in the light of a proper and correct interpretation. The main criterion associated with a bad interpretation is that the information shared was superficial, stereotypical and a "fun and games" presentation.

MBTI'S ORGANIZATION

To quickly summarize the way the instrument is organized, you are asked four general kinds of questions:

- Do you initially get a psychological charge out of engaging with your environment or by reflecting on a circumstance? (This is sorting for extraversion and introversion preferences.)
- Do you initially find sensing, concrete data more appealing, or are you pulled to conceptual, contextual, big-picture frames in a situation? (This is sorting for sensing and intuiting preferences.)

- Do you initially decide from an analytical (logic, critiquing) view or an evaluative (relationship, value) view? (This is sorting for thinking or feeling decision preferences.)
- Do you initially prefer to make a decision or seek more information? (This is sorting for an orientation toward decision making or perception.)

These questions are designed to:

- Identify preferred approaches to taking in information and making decisions.
- Explore how we might use our preferences more effectively.
- Discover how nonpreferred psychological resources can be developed to enrich our life choices.
- Consider aspects of how our patterns in perception and judgment affect career choice, learning strategy, values orientation, problem solving and general orientation toward daily life. In other words, link understanding of self, based on the MBTI, to whatever the goal of using it is.
- Increase greater awareness of the complexity of individuals and mutual and constructive understanding of differences.

The viability of any tool or model is directly related to its appropriate use. When you look at the questions profes-

Ahern said people enjoy these tests because they're intuitive, but he also said they shouldn't be used for business purposes because they lack the scientific backing that validates the MBTI.

"In the 1998 revision of the MBTI, a mathematical process called Item Response Theory was used to validate the forced choice items," he said. "It's the only psychological personality tool in the world that has items that have been validated through that powerful statistical formula, so we know it's measuring what it says it's measuring."

Despite their lack of scientific support, some business leaders remain tempted by the ease with which these tests can be taken online. Without making appointments or sitting through lengthy interpretation sessions, these tools seem to provide results at a lower cost.

To address this issue and make the MBTI available to people everywhere, CPP (formerly, Consulting Psychologists Press) put the tool online for the first time March 3. Mary Patrick, CPP co-president, said this advancement will streamline the assessment process, saving businesses time and money.

"Instead of spending time in the training sessions talking about the assessment and the interpretation for each individual, employees come to the training session already having gone through their interactive feedback online," she said. "This reduces the time needed for training and allows trainers to work on the real issues." The online version of the MBTI can be found at www.mbticomplete.com.

tion and adaptability in organizations.

RETENTION

Retaining good employees is an important aspect of the talent management strategy in any company. Employees who feel supported, encouraged and challenged in ways appropriate to their particular needs are likely to remain. The MBTI is useful for boosting a sense of confidence and enriching personal awareness of ways they can stretch to achieve their goals. Most major studies of employees who exit companies show they do so because they sense a lack of appreciation for their contributions. With MBTI results, employees have a greater chance of more clearly asking for what they need.

As noted above, from an organizational development perspective, when you have a good sample of

signals in talent management are trying to answer, the MBTI's potential applications are numerous.

SELECTION

The MBTI never should be used as part of a selection decision. The tool proposes that preferences are tendencies, not predictions of competence. An individual might have a preference for "thinking" as a decision-making approach but not be any good at it. At an organizational level, selecting potential employees needs to be based on analysis of competencies and appropriate fit, neither of which apply to using the MBTI.

Collecting MBTI information after an individual is hired, however, can be useful for analysis about the attraction, retention and exit of good employees.

For example, if a study revealed that a few of the 16 types, as sorted by the MBTI, constantly were seeking the company, or some types were leaving at a higher rate than others, then you should evaluate procedures and methods that unintentionally might attract some and detract others.

From a talent management perspective, this issue can be important to address. If you notice your company literature lacks an appeal to certain types, you might review how you could make it more interesting to them — there are few who doubt workplace diversity (personality and otherwise) feeds innova-

employees and can analyze who is leaving, you often have clues about the kinds of issues that need to be addressed.

For example, if you find a large number of outstanding contributors with an "intuiting" preference are leaving the organization, you can begin to explore which kinds of policies, programs and support systems appeal more strongly to those types. This is one strategy to encourage them to stay. A knowledgeable type professional could quickly identify those elements that might require some revision if keeping these employees is important.

DEVELOPMENT

In regard to development, the MBTI has its broadest applications. Whether you are exploring individual development, career development, teaming or leadership effectiveness, the MBTI can be a valuable part of training or coaching programs. But the value and viability is directly related to the competence of the tool's user. If the practitioner focuses on only four independent letters, then the tool will not be of lasting value, nor will it provide the insight the individual needs.

Beyond the four letters of the MBTI results is a system of psychological resources that are used to guide individuals' attention, interest and actions. Personality type is based on the proposition that

Figure 1: Eight Mental Resources

EXPLORING YOUR "WHOLE" TYPE		
MENTAL RESOURCE	TYPICAL EXPRESSIONS OF THE MENTAL FUNCTIONS WE ALL USE	LEGEND:
SE External focus	<ul style="list-style-type: none"> • Immediate awareness of situation, individual facts • Focus on present, concrete, practical elements • Demonstrates a sense of urgency 	E=Extraverted F=Feeling
SI Internal rehearsal	<ul style="list-style-type: none"> • Rehearses and reviews information for clarity • Awareness of personal reactions, physical sensations • Specific and realistic memory 	I=Introverted J=Judging
NE Expressive of ideas, associations	<ul style="list-style-type: none"> • Sees links, associations • Generates possibilities, ideas, concepts • Looks for context and big picture 	N=Intuiting P=Perceiving
NI Imagining future	<ul style="list-style-type: none"> • Imagines future outcomes • Anticipates next steps • Makes interconnections of ideas, feelings, concepts 	S=Sensing T=Thinking
TE Critiquing, logical	<ul style="list-style-type: none"> • Critiques to make things better • Responds to order, structure, logic of a situation • Questions assumptions, outcomes, long-term action 	
TI Precise analysis	<ul style="list-style-type: none"> • Analyzes to find the best framework • Precise about information • Sees logical weaknesses quickly 	
FE Empathy, connection	<ul style="list-style-type: none"> • Actively seeks connections with others • Demonstrates empathy quickly • Shows concern with congruence of action with values 	
FI Evaluation of merit	<ul style="list-style-type: none"> • Acts out of mission and value orientation • Seeks interrelated meaning of ideas, actions, purposes • Evaluates the "worth" and "merit" of a situation 	

there are eight psychological resources we use in meeting life's demands. You can't use all these at the same level of consistency and with as much facility, however. To get the most out of the MBTI results, it is vital to understand that its model assumes individuals use eight mental resources in various, typical ways (see Figure 1).

Your type, which the MBTI was designed to tap, is your "typical" use of these eight mental resources — your unconscious automatic pilot. Each of the 16 types, or combinations of four preferences, uses these eight mental functions in a different order.

For example, an individual who sorts ENTJ tends to be a person who prefers to initially critique a situation, looking for a best logical answer (TE). Although this quality is likely to be noticeable to others, the introverted use of intuiting (NI) isn't. The dynamic of this type is that while busy in the external world with analyzing (TE), he or she is internally pondering patterns, associations and big world views of the situation (NI).

The other six mental resources line up behind these two — they are the king and queen of the psychological household.

Research into leadership development in the last 20 years has made it clear that self-awareness of how we affect others is crucial. Further, if development

is to occur, we need a sense of the kind of personal resources we can enrich to increase our behavioral range of response. Looking at personality type from a dynamic perspective, we can get a reasonable handle on how we tend to operate and how we might benefit from using one more often.

Could you use the eight resource expressions without using the MBTI? Of course — these behaviors are common to all and easily identifiable. Without the tool, however, it is more difficult to benchmark how an individual typically approaches daily challenges.

Another aspect of the type dynamic is how stress affects our dynamic and what we might need to develop to cope with stressors more effectively. Type dynamics suggest that under stress, we tend to do more of what we typically do until we reach a threshold of frustration, and then we behave out of character until we get back our equilibrium.

The value of knowing the nature of this "out of character" element, and how to get back our balance, is an important and under-used aspect of type.

From a development perspective, type positively asserts we have eight resources we could learn to use with more facility, and doing so would enable us to be more satisfied and effective at life and work.

Further, the type model holds that it is the dynamic

of these eight resources that tells a complex and rich story that can be quite useful in charting a course for development.

From an organizational development perspective, if a trainer knows the type tendencies of a given group, a better learning design is possible.

For example, if you have a leadership development class in which 80 percent of the participants have preferences for introversion, it is likely to be a class in which built-in reflection time will be appreciated.

Individuals who prefer introversion like to have some time to consolidate insights in their heads when learning something new. Extraverts tend to consolidate insights through some manner of engagement with their environment such as talking it through with others.

All these group tendencies can aid talented trainers, if they make slight adjustments to activities and materials to boost a group's learning.

SUCCESSION PLANNING

As noted with selection processes, the MBTI is not designed to tell you what job is most suitable for an individual. An appropriate understanding of one's type dynamics, however, can aid in identifying the developmental learning strategy that will accelerate improved performance.

Talent managers know 70 percent of learning is related to a variety of challenges you might encounter on the job. The other 30 percent is related to mentoring relationships, courses and published resources.

In all instances, personal awareness about one's type helps individuals select those activities and relationships that will enhance learning.

At the organizational level, it is not uncommon for managers to inadvertently identify employees with high potential because they "look like me." Type tables comparing the general management population, the upper-management group and the selected high potentials will reveal whether type biases are at play.

Assuming people are meeting objectives and deploying the competencies essential to the job, it

is often desirable to have a management makeup that reflects a similar distribution to the workforce as a whole.

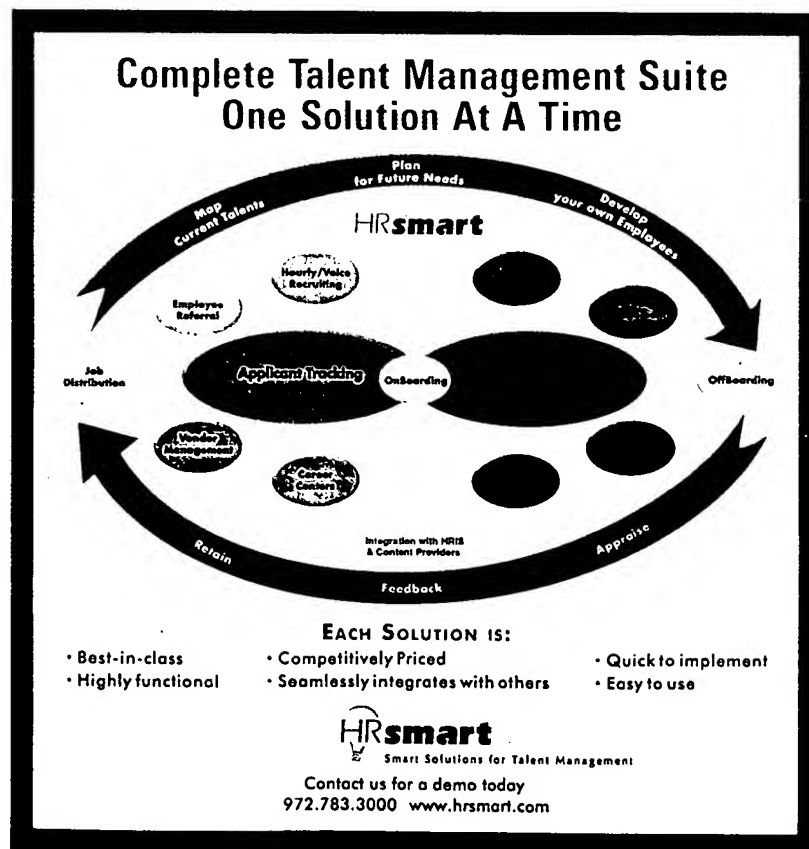
When the collective personality types of identified high potentials reflect that of the upper-management group, some questions need to be asked about how this selection is occurring.

It is likely the MBTI is also the most under-used tool. Too many facilitators provide a "drive-by" introduction to the basic concepts and never really tap into the results in a way that promotes individual development and understanding of group behavior.

After 60 years, the instrument continues to suggest this reasonable way to understand differences enables us to both attribute appropriate intent and tap into our potential resources. It encourages us to ask questions about how we invite people into our organizations and how we promote them.

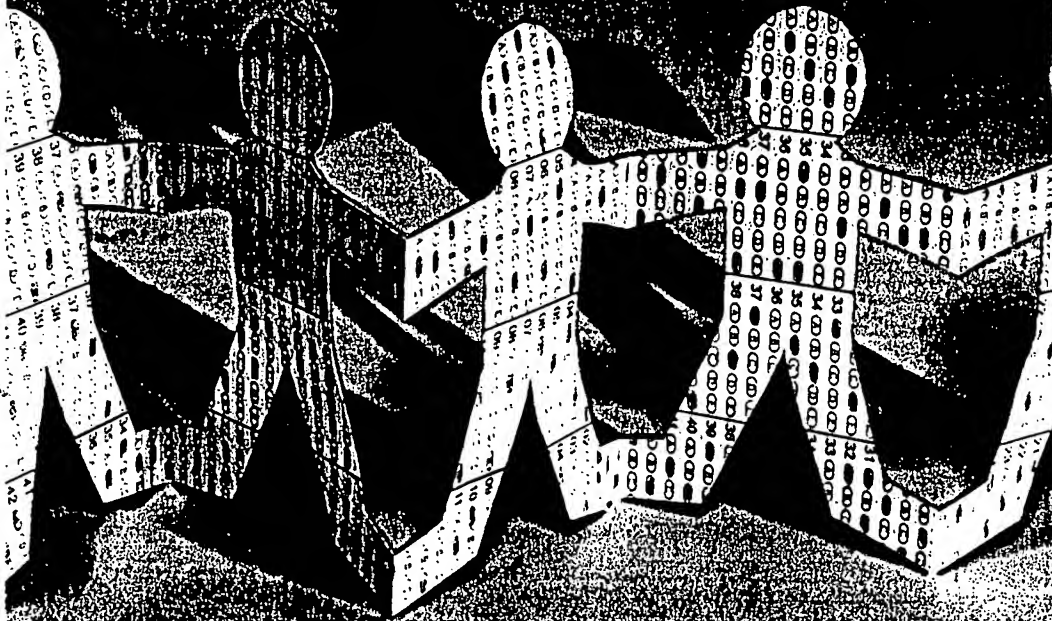
Is it viable? Absolutely — in the hands of a knowledgeable user. Unfortunately, and for far too many learners, such knowledge isn't part of the process. TM

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The Cult of Personality Testing

Reprinted and updated from The Cult of Personality



How Personality Tests Are Leading Us to
Miseducate Our Children, Mismanage Our
Companies, and Misunderstand Ourselves

ANNIE MURPHY PAUL

"The book is a masterpiece of clarity and insight. It is a must-read for anyone who is interested in the psychology of personality testing. It is a book that will change the way you think about personality testing and the way you use it. It is a book that will make you a more thoughtful and informed consumer of personality tests. It is a book that will make you a more thoughtful and informed manager of people. It is a book that will make you a more thoughtful and informed parent. It is a book that will make you a more thoughtful and informed citizen. It is a book that will make you a more thoughtful and informed human being." —The Wall Street Journal



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she's thinking of becoming a teacher. Amy turns to Zichy and beams. "I want to do what you do," she says.

This is type today: from a test created in one woman's living room, the Myers-Briggs Type Indicator has become a global phenomenon. Following Myers's death in 1980, the test's popularity continued to surge; it was given to 750,000 people in 1983 and to 3 million in 1993. It is used by thousands of companies, including eighty-nine of the Fortune 100. Almost unknown before the mid-1970s, it is now, according to its publisher, "the world's most popular personality assessment." It has been translated into sixteen languages, and chapters of the Association for Psychological Type have sprung up in places from Australia to Korea to South Africa (there are more than two dozen chapters here in the United States).

The Indicator—these days it's often referred to by the acronym MBTI—is now under the stewardship of Myers's son, Peter, and his former wife, Katherine Downing Myers. Growing up in Swarthmore, Kathy knew the Myers family well; she, like Peter, has memories of Isabel sitting in the living room, laboring over the Indicator. "She seemed to be in her chair working every morning by eight at the latest and she was frequently there when we went to sleep at night," Kathy recalls. "I mostly remember her in that chair." During Myers's lifetime, Kathy and Peter acted as her "apprentices," helping her develop and refine the instrument; after she died, they became "guardians" of what Myers called "my baby." Like Myers herself, they have great aspirations for the Indicator: in 1999 they established the Myers & Briggs Foundation, a non-profit organization that takes as its mission "extending the benefits of psychological type throughout the world."

In 2001, Mary McCaulley stepped down as president of the Center for the Application of Type; more than three decades' acquaintance with Myers and her test had only deepened her devotion. At the twelfth biennial type conference in 1997, McCaulley gave a toast in honor of what would have been Myers's hundredth birthday, calling the Indicator's creator "one of the few authentic geniuses." (McCaulley died in August 2003.) The center's database now contains the records of more than a million test takers, and its Isabel Briggs Myers Memorial Library holds the world's largest collection of Indicator-related publications, dis-

ence to their types: "She's a total ESFP," "He's such an INTJ." Conflicts are not due to genuine differences of opinion or interest, but simply to the divergent ways various types comprehend and communicate. Even as it elides real differences in philosophy, politics, and status, the Indicator offers test takers an imagined bond with others of their type. Although personality tests ostensibly isolate the ways in which we're unique, the Myers-Briggs often seems aimed at subsuming individuality in a convivial crowd. "It lets people know that they're not alone," explains career counselor Norma Zuber.

The Indicator, in short, is not so much diagnostic as therapeutic, not about exploring people's personalities but about making people feel better. In this sense, the "aha moment" experienced by many of its fans really does mark a transformation. The test taker is no longer an ambivalent, uncertain individual, struggling along in a confusing and sometimes unfriendly world. With the help of the Myers-Briggs, she's become a person with a firmly fixed identity, occupying a snug niche in an orderly universe full of people just like her.

The question, called out from the back of the packed meeting room, is really more like a compliment: "Is there anything that you *haven't* accomplished on behalf of the Myers-Briggs?"

But as Peter Myers slowly gets to his feet and takes a microphone unfamiliarly in hand, he seems full of sober urgency. "Yes, there is," he says meaningfully. Peter, seventy-seven, has his father's height and his mother's gentle features. "The supreme thing that has not yet happened is the acceptance of Jungian psychology and the MBTI by the academic community." He looks around at the crowd of more than a hundred people and speaks emphatically: "We need to prove to the scientists what everyone in this room already knows." He sits down amid a rush of applause.

Although the Myers-Briggs has certainly won over "everyone in this room"—a May 2003 gathering of New York City type professionals, hosted by Shoya Zichy—along with legions of organizations and ordinary people, scientists have remained stubbornly resistant to the Indicator's ingratiating charms. "An act of irresponsible armchair philosophy," writes one. "Too slick and simple, possessing an almost horoscope-like quality," demurs another. "A party game," "a Jungian horoscope"—when

academic psychologists have evaluated the Indicator, their judgments have not been kind.

But the scientists' disdain is shown most clearly in their neglect. Myers-Briggs proponents like to point to the more than 7,800 studies that they say have been conducted on the MBTI. But a significant number of these articles were published in specialty publications like *The Journal of Psychological Type*, *MBTI News*, and *TypeWorks*. Many others appeared in books produced by CPP, the Indicator's distributor. And most research on the Myers-Briggs is concerned with exploring applications for the test—not with proving or refuting its basic legitimacy.

Scientific psychology takes issue, as it has from the beginning, with the very essence of the Myers-Briggs type. The skepticism that greeted Isabel Myers when she introduced her type-based test has since grown only stronger. Most people's personalities, psychologists note, do not fall neatly into one category or another, but occupy some intermediate zone; this fact makes the assignment of type imprecise and even arbitrary. Scientists' doubts are supported by the frequency of changes in test takers' supposedly inborn and immutable types. One investigation (conducted by Indicator proponents, no less) found that the percentage of people who achieved the same four-part type across two administrations of the test was only 47 percent. In other words, more than half of those who took the Myers-Briggs were given a different type when they took the same questionnaire a short while later.

Another study discovered that individuals' types may change even according to the time of day. Its authors described one subject, for example, who "was a good intuitive thinker in the afternoon but not in the morning." One of the most thorough appraisals of the Myers-Briggs appears in *In the Mind's Eye*, an evaluation of "performance-enhancing techniques" commissioned by the National Research Council. Published in 1991, the report notes that a variety of studies have found that 24 to 61 percent of test takers receive the same Myers-Briggs type when reexamined at intervals ranging from five weeks to six years. That means, of course, that 39 to 76 percent are assigned a *different* type. Changes of this frequency, write authors Daniel Druckman and Robert Bjork, "suggest caution in classifying people in these ways and then making decisions that would influence their careers or personal lives." Although the test's champions claim that its feedback can make people

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- 131 "we must continue trying out type descriptors and questions": Kathy Myers, "Katherine Downing Myers and Whole MBTI Type."
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- 131 "a deficit of type development": Myers and Myers, *Gifts Differing*, 177.
- 131 "falsification of type": Ibid.
- 131 "real selves": Ibid.
- 131 "own ideal path of type development": McCaulley, "The Myers-Briggs Type Indicator: A Measure for Individuals and Groups."
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- 132 "A party game": Robert Hogan, quoted in "Personality Test Winning Over All Types," *Baltimore Sun*, July 14, 1990.
- 133 "a Jungian horoscope": Thomas G. Carskadon, "MBTI Characterizations: A Jungian Horoscope?," unpublished paper.
- 133 the more than 7,800 studies that they say have been conducted: Center for Applications of Psychological Type, "Research," www.capt.org/Research/Home.cfm.
- 133 "was a good intuitive thinker in the afternoon": Alida S. Westman and Francis M. Canter, "Diurnal Changes on the Myers-Briggs Type Indicator: A Pilot Study," *Psychological Reports*, April 1984.
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- 134 a circus should have "a little something for everybody": Quoted in James M. Wood, M. Teresa Nezworski, Scott O. Lilienfeld, and Howard N. Garb, "The Rorschach Inkblot Test, Fortune Tellers, and Cold Reading," *Skeptical Inquirer*, July-August 2003.
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- 135 "Pollyanna principle": For more about this phenomenon, see Adrian

NOVELTY under 35 U.S.C. § 102 of Applicant's Invention compared to MBTI

Comparison Topic	Applicant's Invention	MBTI	Difference between present invention and MBTI
1. Number of cognitive functions.	The novel twelve cognitive functions covering the complete spectrum of cognition and forming a complete cognitive architecture system.	Eight cognitive functions, not described as covering the complete spectrum of cognition, and not referred to as a cognitive system.	This invention provides a different and expanded number of twelve cognitive functions to cover the complete spectrum of cognition.
2. Definition of cognitive functions	Definitions derived from everyday language, such as reality, imagination, analysis, intuition, listening, etc., with each having a real-world and conventional definition matching the conventional use of each.	Definitions and names derived from psychological terms that are very ambiguous, indefinite, and conflicting in everyday usage, such as thinking, feeling, sensing, extroversion, and introversion.	This invention overcomes the conflict of psychological definitions by providing definitions and terminology used in daily real-world conversations and business affairs.
3. Relationship of opposite cognitive functions in pairs.	A complementary relationship, with each providing what the other lacks, and with the advantage of using the left function in the pair before the right to prepare the right for most effective use.	Functions in pairs are described as a "choice between opposites," "by nature either/or," and "a dichotomy." There is no indication of the synergy to be achieved by the functions in a pair working together.	This invention categorizes opposites in a way that greatly enhances an understanding of the difference between opposites in pairs, and how they work together in a complementary way.
4. Sorting cognitive functions into left and right columns.	The left column is formed by six cognitive functions with a left-brain-style of cognition which is objective, more conscious, divergent, and serial processing. The right column is formed by six cognitive functions with a right-brain-style of cognition which is subjective, more subconscious, convergent and parallel processing.	There is no indication of criteria for placement of functions in left and right columns, and no definition of the common characteristics of those listed in the left or right columns.	This invention's precise definition of common characteristics of cognitive functions in left and right columns provides a very substantial difference and advantage in learning and developing the effective use of each function in the pair in the appropriate way for a given situation.
5. Utility value in organizational and business settings.	This invention is designed to be utilized in organizational and business group settings to produce meaningful improvements in the competence, effectiveness, and productivity of individuals using the conventional terminology of organizational and business activities.	This instrument was designed to help individuals understand their preference for one of the sixteen "types" of individual profiles defined in the MBTI, without indication of the advantage of becoming competent and effective in each of the eight cognitive functions of the MBTI with each providing what the others lack.	The structure of this invention provides an effective way to develop the cognitive effectiveness of individuals in organizational and business settings not provided by the MBTI.

NOVELTY (cont'd) under 35 U.S.C. § 102 of Applicant's Invention compared to MBTI

Comparison Topic	Applicant's Invention	MBTI	Difference between present invention and MBTI
6. Survey process.	Uses a variety of survey processes to indicate a magnitude of preference for each function as a starting point for developing competencies in each of the twelve cognitive functions.	Dependent on an individual completing a proprietary survey requiring individuals to choose between two opposite choices in pairs of criteria to establish their "type" composed of four functions.	Survey process of this invention is a starting point to understanding the virtues of each of the twelve cognitive functions, and to developing cognitive competencies in each.
7. Survey of entities.	Includes a survey procedure suitable for determining the preferences of a number of entities.	Proprietary survey method wording is very personal and not conducive to being used by an individual to survey the preferences of an entity such as an organization or country.	Survey process of this invention provides a novel way to understand the preferences of a number of different entities.
8. Developing cognitive skills versus "Typing" people.	The principle purpose of this invention is to develop an individual's knowledge of, and cognitive skills in, the twelve novel cognitive functions of this invention. This knowledge will aid the individual in better understanding his or her own nature, as well as the different nature of other individuals and other entities, and to use this information to produce a beneficial real-world result.	The principle purpose of the MBTI is to establish which one of sixteen "types" that an individual most closely resembles, based on their preferred function in each of four pairs of functions. MBTI assumes this type will be their usual and "typical" way of behaving in most situations, and will become "your unconscious automatic pilot" in the words of Roger Pearman in the TM journal article.	This invention avoids "typing" people into one of sixteen "boxes" of a usual and expected behavior pattern. It provides the ability to have individuals use the correct cognitive function in each of the six pairs in the most suitable way and at the most appropriate time for the differing situations occurring each day.
9. Cognitive development capabilities.	Is a cognitive development program to enhance capabilities in each of the twelve cognitive functions and how they interrelate. It provides a cognitive architecture system covering the complete spectrum of cognition, with each cognitive function supplying attributes that the others lack. It allows individuals to understand the benefits of each cognitive function, and how to use each in a more effective and productive way.	Is not presented as a cognitive development program. The MBTI is currently used in development activities, but its effectiveness is severely limited by its psychological language, by not providing needed functions to cover the complete spectrum of cognition, and by the definition of pairs as "either/or" and "choice between opposites," and by its focus on "typing" people into one of sixteen categories.	This invention provides a useful, tangible, and concrete cognitive development program, with a system and method for improving individual's use of each of the twelve cognitive functions covering the complete spectrum of cognition to be more effective and productive in everyday activities.

NOVELTY comparison of TWELVE functions of Applicant's invention with EIGHT functions of MBTI

Ref. Code	Applicant's Invention Description of twelve cognitive functions from Para. [0074] to [0087] of the specification.	MBTI Description of eight functions from Page 6 of the MBTI Manual that are the closest match.	Novelty and difference of this invention compared to MBTI
A	REALITY: Objectively considering tangible facts that are real, absolute, or true today.	SENSING: Focusing mainly on what can be perceived from the five senses.	A precise defined cognitive function for acquiring knowledge about the present Reality of a situation.
B	IMAGINATION: Readily forming images or concepts of new ideas, possibilities, or outcomes for the future.	INTUITION: Focusing mainly on perceiving patterns and interrelationships.	A precisely defined cognitive function that covers Imagination as the word is commonly described and used.
C	ANALYSIS: Separating a subject into its specific parts or basic principles for individual evaluation.	THINKING: Basing conclusions on logical analysis with a focus on objectivity and detachment.	A precisely defined cognitive function that covers Analysis as the word is commonly described and used.
D	INTUITION: Evaluating with sharp insight, a gut feeling, a sixth sense, a skill for guessing accurately	FEELING: Basing conclusions on personal or social values with a focus on understanding and harmony.	A precisely defined cognitive function that covers Intuition as the word is commonly described and used.
E	LISTENING: Considering the words, ideas, and values of others, and reflecting on one's inner thoughts.	INTROVERSION: Directing energy mainly toward the inner world of experiences and ideas.	An entirely different cognitive function that also overcomes the ambiguity and vagueness of a psychological description.
F	EXPRESSING: Sharing ideas, opinions, or information by speech or writing in a way understood by others.	EXTRAVERSION: Directing energy mainly toward the outer world of people and objects.	An entirely different cognitive function that also overcomes the ambiguity and vagueness of a psychological description.
G	COOPERATION: Showing empathy and collaboration with others for mutual benefit and common purposes.	None similar.	A novel cognitive function missing from the MBTI that is a necessary component of a complete cognitive system.
H	INDEPENDENCE: Acting individually with conviction in an internally motivated and self-reliant way.	None similar.	A novel cognitive function missing from the MBTI that is a necessary component of a complete cognitive system.
I	CAUTION: Carefully assessing risks with forethought and a concern for avoiding adversity and mistakes.	None similar.	A novel cognitive function missing from the MBTI that is a necessary component of a complete cognitive system.
J	COURAGE: Confidently and bravely facing challenges, uncertainties, and risks.	None similar.	A novel cognitive function missing from the MBTI that is a necessary component of a complete cognitive system.
K	ADAPTABILITY: Being open, flexible, and spontaneous in learning from new ideas, information, and experiences.	PERCEIVING: Preferring the flexibility and spontaneity that results from dealing with the outer world using one of the Perceiving processes (Sensing or Intuition).	A different and more precise definition that defines a complementary relationship, rather than a "one of" either/or relationship, of cognitive functions.
L	DECISIVENESS: Being resolute and firm in reaching conclusions that are final and beyond doubt.	JUDGING: Preferring the decisiveness and closure that result from dealing with the outer world using one of the Judging processes (Thinking or feeling).	A different and more precise definition that defines a complementary relationship, rather than a "one of" either/or relationship, of cognitive functions.